5 Source Characterization

This section briefly reviews historic source areas at the former fueling and maintenance facility previously discussed in the 1996 Draft RI Report (RETEC, 1996a). Additional potential sources identified from historic facility maps and from interviews with Skykomish residents are also described. Since one of the goals of the Supplemental RI was to respond to specific public concerns, many of the sampling points were selected based on anecdotal evidence regarding possible sources rather than focusing on source areas specifically noted in the Draft RI Report.

5.1 Areas Identified in Draft RI Report

There are no actively operating sources of hazardous substances at the rail yard such as underground storage tanks, landfills or surface impoundments. Thus, the primary source areas are from past releases from storage facilities and from former fueling and maintenance activities at the rail yard. Three distinct source areas were defined in the 1996 Draft RI Report based on historical structures and known operations (RETEC, 1996a). These areas (described below) are:

1) Maintenance area;

2) Fueling area; and

3) Electrical substation and sandblasting area.

Figure 5-1 shows the historical rail yard facilities. Railcar and locomotive maintenance activities were conducted at the engine house, turntable, machine and boiler shop, and areas immediately east of these structures. Fueling operations were performed at the fueling stations, concrete oil unloader pits, and oil pump house. Transformer pads near the east substation were used to store electrical transformers, and in the 1960s the substation was used as a sandblasting facility. The 1996 Draft RI Report describes the specific activities performed within each source area and the products used.

5.2 Areas Identified During Supplemental RI/FS Work Plan Scoping

In addition to filling data gaps associated with the extent and nature of previously identified contamination, one objective of the Supplemental RI fieldwork was to investigate other sources mentioned by Ecology or the public since the Draft RI Report. These areas are discussed below.

5.2.1 Reports of Used Transformer Oil as a Dust Suppressant

Some Skykomish residents have reported that used transformer oil from the rail yard may have been used historically as a dust suppressant on dirt roads. Also, there were reports that used transformer oil from the rail yard may have been spilled or disposed south of the transformer pad area. Residents generally voiced concerns regarding the potential for PCBs to have been associated with the transformer oil.

As discussed in the 1996 Draft RI Report (RETEC, 1996a), PCBs were detected in a few samples from the substation area at low levels. One surface soil sample from the rail yard prior to the Supplemental RI had PCB concentrations greater than the MTCA Method A Criteria for residential soil (Ecology, 2001). During the Supplemental RI fieldwork, PCBs were not detected in any surface soil samples (see Section 7). Transformers associated with the substation area are the only known source of PCBs detected on the rail yard. Although the number and size of transformers have been documented in historic records, information regarding oil composition and volume is not available. Because of the low levels of PCBs observed, the transformers may have been "non-PCB transformers" (as defined in the Toxic Substances Control Act [TSCA]). However, transformer oil contaminated with PCBs could have been the source of the low-level PCBs in soil on the rail yard.

Several road base samples were collected for PCB analysis throughout town during the Supplemental RI, as well as targeted surface soil, subsurface soil, and sediment samples from Sections 2A, 2B, and 3 (Figure 1-2) to investigate the allegations of transformer oil spills or dumping into areas near the former Maloney Creek channel. No PCBs were detected in these samples.

5.2.2 Additional Rail Yard Structures Noted by Ecology

During the Supplemental RI/FS Work Plan scoping, Ecology noted two additional potential historic structures on facility blueprints:

1) An oil pipe extending from the 100,000-gallon oil tank to near the engine house; and

2) A ditch from the steel oil trap to the former Maloney Creek channel.

The historic rail yard facilities shown on Figure 5-1 have been updated from the 1996 Draft RI Report to show these historical structures. Several Supplemental RI sampling points (subsurface borings, monitoring wells, and sediment samples) were selected to investigate the potential of these areas as historic sources of contamination.

5.2.3 Reports of Oil in Former Maloney Creek Channel Area

Some Skykomish residents have reported that the former Maloney Creek channel historically and presently contains oil from the rail yard. Ecology has received reports of residents recalling oil in yards adjacent to the creek, on the banks of the creek, and in the creek. Both the ditch from the steel oil trap, mentioned above, and the reports of used transformer oil disposal, could be potential sources of oil in the former Maloney Creek channel. In response, Sections 2B and 3 (Figure 1-2) were designated in the Supplemental RI/FS Work Plan for surface and subsurface soil sampling on either side of the creek and sediment sampling in the creek to address these concerns.

5.2.4 Report of Oil Running Through a Yard

Ecology received a report from one Skykomish resident in Section 1C (Figure 1-2) who recalled oil running in her front yard many years ago. Monitoring well 1C-W-1 was installed to investigate this allegation. Results are discussed in more detail in Section 7.1.3. No contamination was detected in surface soil at this location.

5.2.5 Intermittent Seasonal Creek or Spring

Some Skykomish residents requested sampling at a spring or intermittent creek not previously investigated. The spring or creek is located in Section 5 on Figure 1-2. Sediments in this spring or creek were sampled during the Supplemental RI. The results are discussed in Section 9.